## AMENDMENTS TO THE CLAIMS

*Please amend the claims as follows:*

1. (Currently amended) A speech processing method comprising:[[:]]

receiving speech signals;

processing the received speech signals to generate a plurality of phoneme clusters;

grouping the plurality of phoneme clusters into a first cluster node and a second cluster node, wherein the first cluster node comprises at least one phoneme cluster from the plurality of phoneme clusters; and

determining ~~automatically if a~~ when the at least one phoneme cluster in the first cluster node is to be moved into the second cluster node based on a likelihood increase of the phoneme cluster of the first cluster node from being in the first cluster node to being in the second cluster node.

2. (Currently amended) The speech processing method of claim 1, further comprising:

moving the at least one phoneme cluster in the first cluster node into the second cluster node ~~if~~ when the at least one phoneme cluster in the first cluster node is determined to be moved into the second cluster node.

3. (Currently amended) The speech processing method of claim 2, wherein moving the at least one phoneme cluster in the first cluster node into the second cluster node includes:

moving the at least one phoneme cluster in the first cluster node into the second cluster node ~~if~~ when the most likelihood increase is more than a threshold value.

4. (Currently amended) The speech processing method of claim 1, wherein the plurality of phoneme clusters are triphone clusters based on a hidden markov model (HMM).

5. (Currently amended) The method of claim [[1]] 4, wherein the grouping of the plurality of phoneme clusters includes:

grouping the triphone clusters according to answers to best phonetic context based questions related to the triphone clusters.

6. (Currently amended) A speech processing system comprising:

an input to receive speech signals; and

a processing unit ~~to~~ to:

process received speech ~~signals,~~ signals;

~~to~~ generate a plurality of phoneme clusters from the processed received speech ~~signals,~~ signals;

~~to~~ group the plurality of phoneme clusters into a first cluster node and a second cluster node, wherein the first cluster node comprises at least one phoneme cluster from the plurality of phoneme clusters; and

~~to~~ determine ~~automatically if a~~ when the at least one phoneme cluster in the first cluster node is to be moved into the second cluster node based on a

likelihood increase of the phoneme cluster of the first cluster node from being in the first cluster node to being in the second cluster node.

7. (Currently amended) The speech processing system of claim 6, wherein the processing unit is to move the at least one phoneme cluster in the first cluster node into the second cluster node ~~if~~ when the at least one phoneme cluster in the first cluster node is determined to be moved into the second cluster node.

8. (Currently amended) The speech processing system of claim 7, wherein the processing unit is to move the at least one phoneme cluster in the first cluster node into the second cluster node ~~if~~ when the most likelihood increase is more than a threshold value.

9. (Currently amended) The speech processing system of claim 6, wherein the plurality of phoneme clusters are triphone clusters based on a hidden markov model (HMM).

10. (Original) The speech processing system of claim 9, wherein the processing unit is to group the triphone clusters according to answers to best phonetic context based questions related to the triphone clusters.

11. (Currently amended) A machine-readable medium that provides instructions, which ~~if~~ when executed by a processor, cause the processor to perform the operations comprising:

receiving speech signals;

processing the received speech signals to generate a plurality of phoneme clusters;

grouping the plurality of phoneme clusters into a first cluster node and a second cluster node, wherein the first cluster node comprises at least one phoneme cluster from the plurality of phoneme clusters; and

determining ~~automatically if a~~ when the at least one phoneme cluster in the first cluster node is to be moved into the second cluster node based on a likelihood increase of the phoneme cluster of the first cluster node from being in the first cluster node to being in the second cluster node.

12. (Currently amended) The machine-readable medium of claim 11, further providing instructions, which ~~if~~ when executed by a processor, cause the processor to perform the operations comprising:

moving the at least one phoneme cluster in the first cluster node into the second cluster node ~~if~~ when the at least one phoneme cluster in the first cluster node is determined to be moved into the second cluster node.

13. (Currently amended) The machine-readable medium of claim 12, further providing instructions, which ~~if~~ when executed by a processor, cause the processor to perform the operations comprising:

moving the at least one phoneme cluster in the first cluster node into the second cluster node ~~if~~ when the most likelihood increase is more than a threshold value.

14. (Currently amended) The machine-readable medium of claim 11, ~~further providing instructions, which if executed by a processor, cause the processor to perform the operations comprising:~~

~~processing the received speech signals to generate a~~ wherein the plurality of phoneme clusters that are triphone clusters based on a hidden markov model (HMM).

15. (Currently amended) The machine-readable medium of claim 14, further providing instructions, which ~~if~~ when executed by a processor, cause the processor to perform the operations comprising:

grouping the triphone clusters according to answers to best phonetic context based questions related to the triphone clusters.